Exhibit R-2, RDT&E Budget Item Justification: PB 2022 United States Special Operations Command	Date: May 2021
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 2: *Applied Research*	**R-1 Program Element (Number/Name)** PE 1160401BB / *SOF Technology Development*

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	588.984	36.230	49.464	44.829	-	44.829	-	-	-	-	-	-
S100: *SOF Technology Development*	588.984	36.230	49.464	44.829	-	44.829	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This program element enables United States Special Operations Command (USSOCOM) to conduct studies and develop laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to Department of Defense (DOD), other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire disruptive solutions and emerging technologies for Special Operations Forces (SOF). This project provides an investment strategy for USSOCOM to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, human endurance and sensory performance, and technology development objectives. This investment strategy is aligned to establish future SOF capability in support of Joint Warfighting Concepts.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	37.569	42.464	45.304	-	45.304
Current President's Budget	36.230	49.464	44.829	-	44.829
Total Adjustments	-1.339	7.000	-0.475	-	-0.475
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-5.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	12.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.339	-			
• Other Adjustments	-	-	-0.475	-	-0.475

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Project: S100: *SOF Technology Development*		
Congressional Add: *National Consortium for the Study of Terrorism*	-	7.000
Congressional Add: *Sustained Human Performance and Resilience*	-	5.000
Congressional Add Subtotals for Project: S100	-	12.000

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Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Congressional Add Totals for all Projects	-	12.000

Change Summary Explanation

Funding:

FY 2020: Net decrease is due to transfer of funds to Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) programs ($1.339 million).

FY 2021: Net increase of $7.000 million is due to a Congressional add for national consortium for the study of terrorism ($7.000 million), sustained human performance and resilience ($5.000 million), and a Congressional directed reduction for unjustified growth (-$5.000 million).

FY 2022: Net decrease is due to funding made available to support emerging critical Command requirements ($0.475 million).

Schedule: None.

Technical: None.

Exhibit R-2A, RDT&E Project Justification: PB 2022 United States Special Operations Command			Date: May 2021
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / *SOF Technology Development*	Project (Number/Name) S100 / *SOF Technology Development*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
S100: *SOF Technology Development*	588.984	36.230	49.464	44.829	-	44.829	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental co-investments with Department of Defense (DOD), other government agencies, and commercial organizations allow USSOCOM to influence the schedule and direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with capability deficiencies, capability objective, technology thrust areas, and technology objectives through key stakeholder relationships with DOD and government technology developers. Technology development needs in these areas may be advertised to industry and government research and development agencies via agency announcements and calls for white papers.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: SOF Technology Development	17.320	33.389	40.670
Description: This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Beginning in FY 2021, this project will continue to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increases focus on tactical sensors and enabling technologies in support of the Intelligence, Surveillance, and Reconnaissance (ISR) mission set focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing.			
FY 2021 Plans: Continue ongoing technology development projects in areas such as, but not limited to: enabling power technologies, signature reduction technologies, high data-rate throughput, and advances in lightweight armor and materials. Advance technologies for combat medical equipment, biotechnologies, tactics, human performance, optics, sensor, information sources, and processing improvements, improves human-machine interfaces and displays, identifies SOF specific machine learning/artificial intelligence, and secure communications. Continue pursuit of methods to reduce operator load and provides advanced protection. Develop technologies for improved and widened window of target engagement (escalation of force), pursue enhancements to technologies that can aid in detection of enemy intentions and status, and continue development and exploration of novel technologies across the electromagnetic spectrum. Continue to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increase focus on tactical sensors and enabling technologies in support of the ISR mission set. Based upon agreed			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
technology maturity metrics, transfers successful projects into programs of record. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. ***FY 2022 Plans:*** Continues ongoing technology development projects in areas such as, but not limited to: enabling power technologies, signature reduction technologies, high data-rate throughput, and advances in lightweight armor and materials. Advances technologies for combat medical equipment, biotechnologies, tactics, human performance, optics, sensor, information sources, and processing improvements, improves human-machine interfaces and displays, identifies SOF specific machine learning/artificial intelligence, and secure communications. Continues pursuit of methods to reduce operator load and provides advanced protection. Develops technologies for improved and widened window of target engagement (escalation of force), pursues enhancements to technologies that can aid in detection of enemy intentions and status, and continues development and exploration of novel technologies across the electromagnetic spectrum. Continues to exploit and integrate emerging technologies for sensors and surveillance enabling systems. Increases focus on tactical sensors and enabling technologies in support of the ISR mission set. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $7.281 million is due to an increase in the activities to integrate Artificial Intelligence and Biotechnologies.			
Title: Tagging, Tracking, and Locating Technologies (TTL) Project ***Description:*** TTL funds Applied Research projects identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL applies Intelligence, Surveillance, and Reconnaissance (ISR) focused leading edge technology, biometric and biotechnology, which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing in support of the TTL mission.	15.387	-	-
Title: Classified Sub-Project ***Description:*** Classified Sub-Project (provided under separate cover). ***FY 2021 Plans:*** Details provided under separate cover. ***FY 2022 Plans:*** Details provided under separate cover. ***FY 2021 to FY 2022 Increase/Decrease Statement:***	3.523	4.075	4.159

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Details provided under separate cover.			
Accomplishments/Planned Programs Subtotals	36.230	37.464	44.829

	FY 2020	FY 2021
Congressional Add: National Consortium for the Study of Terrorism	-	7.000
FY 2021 Plans: Establish Joint Special Operations University (JSOU) Advanced Research efforts for Irregular and Asymmetric Warfare in partnership with OSD Research and Engineering (R&E). Expand the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The START effort will be awarded to the University of Maryland, College Park as the lead for the National Consortium for the Study of Terrorism by June, 2021, using data sets and scientists' findings regarding Irregular and Asymmetric Warfare topics specific to SOF that support integrative statecraft and applied scenario testing. Results of this effort are expected to be completed within eight months after contract award. The deliverable for START is an academic study conducted by a consortium of university-based research entities who will develop a wargame to explore multi-national and inter-agency challenges integral to Irregular Warfare conducted by SOF. Upon completion of the applied research effort, the consortium will deliver proposed updates to JSOU's existing curriculum and training programs of instruction and will be incorporated into courses by Academic Year 2022.		
Congressional Add: Sustained Human Performance and Resilience	-	5.000
FY 2021 Plans: Continue ongoing development of human performance technology development projects, including performance nutrition and supplementation, achieving the results of exercise via alternative methods, maximizing cognitive performance, musculoskeletal injury prediction, sleep restoration, holistic assessment (e.g., physical/cognitive metrics, biomarkers, and genomics), and tracking of exposures throughout a SOF Operator's career. Continue pursuit of methods to reduce operator load and improve human-machine interfaces and displays. Established a detailed spend plan to execute the FY21 Appropriations Add for Sustained Human Performance. Funds will be obligated through a variety of Human Performance contract actions to be completed in June – August 2021. All efforts are expected to be completed within 12-18 months after contract award.		
Congressional Adds Subtotals	-	12.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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D. Acquisition Strategy

N/A